SWA	REACH DOC			TT OIT	Standard Reach		ed width ≤ 10 m	n) = 15	0 m Di		een trans		
Proje	ect Name:				Alternate Re	Date:	wetted width >1	u m) =	250 M		me:	nsects = 2	:5 M
Strea	am Name:					Site Name	e/ Description:						
Site	Code:					Crew Mer	nbers:						
Latitu	ude: °N					datum:							
Long	jitude: °W					other:							
Α	MBIENT WATER	QUALITY M	EASUREME	NTS	all mete	Yes	□ No □	(5	see reach	REACH L		top of form	n)
Tem	ıp (°C)	рН			linity g/L)	Turbidity (ntu,		`		Length (m		тор от тоги	<u>')</u>
	solved mg/L)	Specific Cond. (µS)			inity g/L)	Dissolve Silica (optiona	d	Ехр	lanation	:			
1 st m	DISCHARGE neasurement = le			ream)			ck if discha (expl			ements rotes secti		sible	
	VELOCITY AREA	A METHOD (p	oreferred)		Transect Widt	h:		В		OBJECT Note: The control of the cont			Y if
	Distance from Left Bank (cm)	Depth (cm)	Velocity (m/sec)		Distance from Left Bank (cm		Velocity (m/sec)			Float 1	Float	2 Floa	at 3
1				11				-	stance				
2				12				Flo	at Time				
3				13			1	wid	Floath (m)	Upper Upper	ross Se Middle	ction Low	er
4				14				d	epth	Section	Section	Secti	
5 6				15 16					oth 1				
7				17					pth 2				
8				18				-	pth 3				
0				19				-	pth 4				
9				. •					pth 5				
9				20					puis				
			Notal		IELD CONDIT	IONS (chec	ck one box pe						
10	Evidence of rec	ent rainfall (BLE F	IELD CONDIT	,	ck one box pe		;)	nimal		% flow	
10	Evidence of rec		(enough to	BLE F	ase surface ru	inoff)			c) mir	nimal year	inc		

8				18						Dep	oth 3					
9				19						Dep	oth 4					
10				20						Dep	oth 5					
			Not	BLE F	IELD C	ONDITIO	NS (che	ck one b	ox per	topic	:)					
E	Evidence of rec	ent rainfall	(enough t	o incre	ase surfa	ace run	off)	NC)		m	ninimal		>10 ^c incr	% flove	
	Evidence of fire	es in reach	or immed	iately u	ıpstream	(<500 r	m)	NC)		<	1 year		< 5	years	3
	Daminant la	/ /						Agricu	Iture		F	orest	orest		gelan	d
	Dominant lar	nduse/ land	cover in a	rea sur	roundin	g reacn		Urba Indus			Sub	urb/Town		Ot	her	
ADD	ITIONAL COBBL	.E 1	2	3	4	5	6	7	8		9	10	11	1	2	13
E	MBEDDEDNESS MEASURES															
	y over from transe	ct 14	15	16	17	18	19	20	21		22	23	24	2	.5	
	forms if needed; measure in mm)															

Site Code:			Da	te:/	/								
	SLOPE and	Bear	ING FOI	Rм (trar	sect ba	ased - fo	or Full	PHAB	only)		CL	UTOLEVI .INOMET ANDLEVI	ER
Ot antimor				EGMENT ect distance egments are		gment	(re	cord perce	SUPPLEMENT of inter-transo upplemental se	ect dista	ance i	n each seg	ment
Starting Transect	Stadia rod measurement	Slo El	pe (%) or evation fference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)		dia rod Irements	Slope or Elevation Difference	Segme Leng (m)	ent th	Bearing (0°-359°)	Percent of Total Length (%)
K													
J													
ı													
Н								 					
G								!					
F													
E													
D								 					
С													
В													
Α								<u> </u>					
additional calculation area													
				Additi	ONAL HAE	вітат Сна	RACTER	IZATION					
Para	meter		Optim		S	uboptima	al	ı	Marginal			Poor	
•	l Substrate/ over	favorable and f gra submer	ish cover (50 dient stream	al colonization 0% for low- s); mix of dercut banks,	50% for	nix of stable ha low-gradient st red for full color potential	reams);	30% in Id	ix of stable habitat ow-gradient streams frequently disturbed removed	s);	(10% lack	than 20% sta in low-gradier k of habitat is trate unstable	t streams); obvious;
So	ore:	20 1	9 18	17 16	15 14	4 13 1	2 11	10 9	8 7	6	5	4 3 2	1 0
Sediment	Deposition	or point the bot	bars and lestom affected	nent of islands as than 5% of by sediment low-gradient	formation sand, or find the bottom	new increase on, mostly from ine sediment; om affected (20 gradient stream	gravel, 5-30% of -50% in	sand, or fin 50% of the	eposition of new grees sediment on barse bottom affected (flow-gradient stream	; 30- 50 -	incre more chang	deposits of fi eased bar develon 50% of ging frequently ow-gradient str	elopment; he bottom / (>80% in
Sc	ore:	20 1	19 18	17 16	15 14		2 11	10 9	8 7	6		4 3 2	-
Channel	Alteration		lization or dre imal; stream pattern		(e.g., bridg of past cl may b	hannelization page abutments); hannelization (e present but relization not pr	evidence > 20yrs) ecent	embankme present on	ation may be extens of sor shoring struc both banks; 40 to am reach disrupted	tures 80%	cement reach c Instrea	s shored with t; Over 80% o channelized ar am habitat gre or removed er	f the stream nd disrupted. atly altered
Sc	ore:	20 1	9 18	17 16	15 14	4 13 1	2 11	10 9	8 7	6	5	4 3 2	1 0

Site Code:				;	Site Nar	me:										Da	te:	/		_/		
Wetted Wid	dth (m):			·	Bank	full Width	(m):					Ва	nkfull	Heigh	t (cm)				rar	nsec	t A	
TR	ANSEC	T SUE	BSTR	ATES		Cobble		Hu	MAN	İNFI	LUEN	ICE				s = On B from Ch				k and 10		Channel
Position	Dist from LB (cm)	Depti (cm)		m/ size	СРОМ	dednes			cle on wette						Ban			nnel			ht Ban	ık
Left Bank	25 (om)			J.400	РΑ			Wall	ls/ Rip	-rap/	Dams		Р	С	В	0	Y	N	0	В	C	Р
Left Center					РΑ			Build	dings				Р	С	В	0	Υ	N	0	В	В С	Р
Center					P A			Pave	ement	/ Clea	ared L	ot	Р	С	В	0			0	В	C	Р
Right Center					РА			Roa	d/ Rail	Iroad			Р	С	В	0	Υ	N	0	В	С	Р
Right Bank					P A			Pipe	es (Inle	et/ Ou	tlet)		Р	С	В	0	Υ	N	0	В	B C	Р
	ІК ЅТАВ							Land	dfill/ Tr	rash			Р	С	В	0	Υ	N	0	В	3 C	Р
downstrea	am of tran	sect be	etweer	n bankfı	ull - wet	ted width))		k/ Lawi				Р	С	В				0			
Left Bank	ero	ded	vu	ılnerabl	е	stable			/ Crops				Р	С	В	0			0			
							_		ture/ R				P	C	<u>В</u> В	0			0			
Right Bank	ero	ded	vu	ılnerabl	е	stable			ging O		lioris	_	P		В В		Y	N	0			
							_		etation		nagem	ent	<u>'</u> Р	C	<u>В</u>	0		14	0			
								Brid	ges/ A	butm	ents		Р	С	В	0	Υ	N	0	В	в С	Р
								Orch	nards/	Vine	yards		Р	С	В	0			0	В	C	Р
VEG	PARIAN ETATION downstrea			Sparse	nt (0%) (<10 oderate		Heavy Very cir		>75%))		ı	NSTRI HABIT OMPLI	ГАТ	,	3 = Hea	rse (erate (10)-75%)		READ	NSIOME DINGS covere	(0-17)
Vegeta	tion Cla	ss		Left l	Bank		Rigl	ht Ba	nk		Fi	lame	ntous A	Algae		0 1	2	3 4		Cen		
		Up	per Ca	nopy (>5 m h	igh)							Macre ent Ve			0 1	2	3 4	1	Cen		
	and sapling 5 m high	gs	0	1 2	3 4	4 () 1	2	3 4	ŀ	В	oulde	rs			0 1	2	3 4		Upstre		
		Lowe	r Cano	ру (0.	5 m-5 m	n high)					W	oody	Debris	s >0.3	m	0 1	2	3 4	Ш	Cen		
	egetation m to 5 m		0	1 2	3 4	4 () 1	2	3 4	ŀ	W	oody	Debris	s <0.3	m	0 1	2	3 4	╽┞	Center	Dight	
				over (<	:0.5 m ł	nigh)					U	nderd	cut Ban	ıks		0 1	2	3 4		Center	Rigiti	
Woody shru	ubs and sa <0.5 m	aplings	0	1 2	3 4	4 0	1	2	3	4	0	verha	ang. Ve	egetation	on	0 1	2	3 4	Ш	Left E		
Herb	s/ grasses	1	0	1 2	3 4	4 0	1	2	3	4	Li	ve Tr	ee Roo	ots		0 1	2	3 4	╁╂	Right		
Barren,	bare soil/	duff	0	1 2	3 4	4 0	1	2	3	4	Aı	tificia	al Struc	tures		0 1	2	3 4	<u>] </u>	(optio		
		Inte	r-tra	ans	ect:	AB				١	Vette	d Wi	dth (m):								
(% bet	W HABIT tween tran	nsects,				TRANSE re in mm		size (classe			Er	Cobb	led-				if take		OGR nd reco		
Chann	nel Type		%	Posi	ition	Dist from LB (cm)	Depti (cm)	s	nm/ ize ass	СР	ОМ		ness ('	/0)	Dow	nstrear	n (req ı					
Casca	de/ Falls			Left I	Bank					Р	Α											Ш
Ra	apid			Left C	enter					Р	Α											
R	iffle			Cer	nter					Р	Α				Upst	ream (option	al)				
F	Run			Right (Center					Р	Α											Ш
G	ilide			Right	Bank					Р	Α											
Р	ool			Not	te: Subs	strate size															one of	size
Г)rv					class ca	ategor	ies list	ted or	n the	supp	leme	ental p	age (c	direct	measu	iremei	nts are	e pref	erred)		

FULL VERSION Revision Date: July 10, 2007

Site Code:	Site Name:	Da	te://
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm):	Transect B

TR	RANSEC	T SUBS	TRATES			Cobble Embed-
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СР	ОМ	dedness (%)
Left Bank				Р	Α	
Left Center				Р	Α	
Center				Р	Α	
Right Center				Р	Α	
Right Bank				Р	Α	

		score zone 5m up etween bankfull - w	
Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable

HUMAN INFLUENCE		ot Presei 10 m + <	nt B = 50 m fro				en Bank a el (record			annel
(circle only the closest to wetted channel)		Left l	Bank		Cha	nnel		Right	Bank	
Walls/ Rip-rap/ Dams	Р	С	В	0	Υ	N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	N	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)		Spa	rse	(<	5) 10%) e (10-4	4 = \	/ery l	Hèav	y>75	
Vegetation Class		Le	ft B	ank		ı	Righ	nt Ba	ank	
Upp	er Ca	anop	ру (>	5 m	high)					
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4
Lower	Can	ору	(0.5	m-5	m hig	h)				
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4
Grou	ınd C	ove	r (<0	.5 n	n high)					
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4

INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Spar Mod Heav	ent rse erate (vy (Heav	(<10) 10-40 40-75)%))%) 5%)
Filamentous Algae	0	1	2	3	4
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4
Boulders	0	1	2	3	4
Woody Debris >0.3 m	0	1	2	3	4
Woody Debris <0.3 m	0	1	2	3	4
Undercut Banks	0	1	2	3	4
Overhang. Vegetation	0	1	2	3	4
Live Tree Roots	0	1	2	3	4
Artificial Structures	0	1	2	3	4

о в с	'
DENSIOMI READINGS count covered	(0-17)
Center Left	
Center Upstream	
Center Downstream	
Center Right	
Left Bank (optional)	
Right Bank (optional)	

Int	er-tr	ansect:	BC			Wette	d Width (m):
FLOW HABITATS (% between transect total=100%)			-TRANSE				Cobble Embedded-
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	ness (%)
Cascade/ Falls		Left Bank				P A	
Rapid		Left Center				РΑ	
Riffle		Center				РА	
Run		Right Center				P A	
Glide		Right Bank				P A	
Pool		Note: Subs	strate size	es can be	recorde	ed either as	direct measure
Dry			class c	ategories	s listed o	n the supp	lemental page (

Site Code:	Site Name:		Date:///
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm)	Transect C

TF	TRANSECT SUBSTRATES									
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ		dedness (%)				
Left Bank				Р	Α					
Left Center				Р	Α					
Center				Р	Α					
Right Center				Р	Α					
Right Bank				Р	Α					

BANK STABILITY (score zone 5m up and 5m downstream of transect between bankfull - wetted width)										
Left Bank eroded vulnerable stable										
Right Bank	eroded	vulnerable	stable							

HUMAN INFLUENCE		0 = Not Present B = On Bank C = Between Bank and 10 m from Channel P = >10 m + <50 m from Channel Channel (record Yes or No)								
(circle only the closest to wetted channel)		Left l	Bank		Cha	nnel	Right Bank			
Walls/ Rip-rap/ Dams	Р	P C B 0				N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	Ν	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy>75%) 2 = Moderate (10-40%) circle one										
Vegetation Class		Le	ft B	ank			Right Bank				
Upper Canopy (>5 m high)											
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4	
Lower Canopy (0.5 m-5 m high)											
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4	
Grou	ınd C	ove	r (<0).5 n	n high)						
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4	
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4	
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4	

INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Spar Mod Heav	ent se erate (/y (Heav	10-40 40-7	Ó%) O%) 5%)
Filamentous Algae	0	1	2	3	4
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4
Boulders	0	1	2	3	4
Woody Debris >0.3 m	0	1	2	3	4
Woody Debris <0.3 m	0	1	2	3	4
Undercut Banks	0	1	2	3	4
Overhang. Vegetation	0	1	2	3	4
Live Tree Roots	0	1	2	3	4
Artificial Structures	0	1	2	3	4

	•
DENSIOMI READINGS count covere	(0-17)
Center Left	
Center Upstream	
Center Downstream	
Center Right	
Left Bank (optional)	
Right Bank (optional)	

Int	er-tr	ansect:	CD			Wetted	d Width (m):
FLOW HABITATS (% between transects, total=100%)			-TRANSE ure in mm			as direct measure	
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	
Cascade/ Falls		Left Bank				P A	
Rapid		Left Center				P A	
Riffle		Center				РА	
Run		Right Center				РΑ	
Glide		Right Bank				P A	
Pool		Note: Subs					
Drv			class ca	ategories	s listed o	n the supp	lemental page (

Site Code:	Site Name:		Date://
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm)	Transect D

TF	TRANSECT SUBSTRATES									
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СР	МО	dedness (%)				
Left Bank				Р	Α					
Left Center				Р	Α					
Center				Р	Α					
Right Center				Р	Α					
Right Bank				Р	Α					

BANK STABILITY (score zone 5m up and 5m downstream of transect between bankfull - wetted width)											
Left Bank	Left Bank eroded vulnerable stable										
Right Bank	eroded	vulnerable	stable								

HUMAN INFLUENCE		0 = Not Present B = On Bank C = Between Bank and 10 m from Channel P = >10 m + <50 m from Channel Channel (record Yes or No)								
(circle only the closest to wetted channel)		Left l	Bank		Cha	nnel	Right Bank			
Walls/ Rip-rap/ Dams	Р	P C B 0				N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	Ν	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)		Spa	rse	`(<	5) 10%) e (10-4	4 = \	/ery l	Hèav	y>75	
Vegetation Class		Le	ft B	ank			Righ	nt Ba	ank	
Upp	er Ca	anop	ру (>	5 m	high)					
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4
Lower	Can	ору	(0.5	m-5	m hig	h)				
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4
Grou	ınd C	ove	r (<0).5 n	n high)					
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4

INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Spar Mod Heav	ent se erate (/y (Heav	10-40 40-7	Ó%) O%) 5%)
Filamentous Algae	0	1	2	3	4
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4
Boulders	0	1	2	3	4
Woody Debris >0.3 m	0	1	2	3	4
Woody Debris <0.3 m	0	1	2	3	4
Undercut Banks	0	1	2	3	4
Overhang. Vegetation	0	1	2	3	4
Live Tree Roots	0	1	2	3	4
Artificial Structures	0	1	2	3	4

DENSIOMI READINGS count covere	(0-17)
Center Left	
Center Upstream	
Center Downstream	
Center Right	
Left Bank (optional)	
Right Bank (optional)	

Int	Inter-transect: DE					Wette	d Width (m):	
(% hetween transects					between transects, (measure in mm or use size classes)			
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	POM Embedded- ness (%)	
Cascade/ Falls		Left Bank				РΑ		
Rapid		Left Center				РΑ		
Riffle		Center				РΑ		
Run		Right Center				РΑ		
Glide		Right Bank				РΑ		
Pool		Note: Subs					direct measure	
Dm/	1 !		class ca	ategories	s listed c	on the supp	lemental page (

Site Code:	Site Name:	D	Pate://
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm):	Transect E

Tr	RANSEC	T SUBS	TRATES			Cobble Embed-
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СР	ОМ	dedness (%)
Left Bank				Р	Α	
Left Center				Р	Α	
Center				Р	Α	
Right Center				Р	Α	
Right Bank				Р	Α	

		score zone 5m up etween bankfull - w	
Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable

HUMAN INFLUENCE		ot Preser 10 m + <					en Bank a el (record			annel
(circle only the closest to wetted channel)		Left I	Bank		Cha	nnel		Right	Bank	
Walls/ Rip-rap/ Dams	Р	С	В	0	Υ	N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	N	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)		Spa	rse	(<	%) 10%) :e (10-4	4 = \	ery l	Heav	y>75	
Vegetation Class		Le	ft B	ank		-	Righ	nt B	ank	
Upp	er Ca	anop	ру (>	5 m	high)					
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4
Lower	Can	ору	(0.5	m-5	m hig	h)				
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4
Grou	ınd C	ove	r (<0).5 n	n high)	•				
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4

INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Spar Mod Heav	ent se erate (/y (Heav	(<10) 10-40 40-75	0%) 0%) 5%)
Filamentous Algae	0	1	2	3	4
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4
Boulders	0	1	2	3	4
Woody Debris >0.3 m	0	1	2	3	4
Woody Debris <0.3 m	0	1	2	3	4
Undercut Banks	0	1	2	3	4
Overhang. Vegetation	0	1	2	3	4
Live Tree Roots	0	1	2	3	4
Artificial Structures	0	1	2	3	4

DENSIOMI READINGS count covere	(0-17)
Center Left	
Center Upstream	
Center Downstream	
Center Right	
Left Bank (optional)	
Right Bank (optional)	

Int	Inter-transect: EF					Wetted	d Width (m):
(% hetween transects					/een transects, (measure in mm or use size classes) Cobb		
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	ness (%)
Cascade/ Falls		Left Bank				РΑ	
Rapid		Left Center				РΑ	
Riffle		Center				P A	
Run		Right Center				P A	
Glide		Right Bank				РΑ	
Pool		Note: Subs					direct measure
D	1 1		class ca	ategories	s listed o	n the supp	lemental page (

Site Code:	Site Name:	Dat	te:/
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm):	Transect F

Tr	TRANSECT SUBSTRATES										
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ		dedness (%)					
Left Bank				Р	Α						
Left Center				Р	Α						
Center				Р	Α						
Right Center				Р	Α						
Right Bank				Р	Α						

	BANK STABILITY (score zone 5m up and 5m downstream of transect between bankfull - wetted width)									
Left Bank eroded vulnerable stable										
Right Bank	eroded	vulnerable	stable							

HUMAN INFLUENCE		ot Presei 10 m + <					en Bank ar el (record			annel
(circle only the closest to wetted channel)		Left l	Bank		Cha	nnel	Right Bank			
Walls/ Rip-rap/ Dams	Р	С	В	0	Υ	N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	Ν	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy>75%) 2 = Moderate (10-40%) circle one									
Vegetation Class		Le	ft B	ank	•	Right Bank				
Upper Canopy (>5 m high)										
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4
Lower Canopy (0.5 m-5 m high)										
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4
Grou	ınd C	ove	r (<0).5 n	n high)					
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4

INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Mod	ent se erate (/y (Heav	10-40 40-75	0%) 0%) 5%)
Filamentous Algae	0	1	2	3	4
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4
Boulders	0	1	2	3	4
Woody Debris >0.3 m	0	1	2	3	4
Woody Debris <0.3 m	0	1	2	3	4
Undercut Banks	0	1	2	3	4
Overhang. Vegetation	0	1	2	3	4
Live Tree Roots	0	1	2	3	4
Artificial Structures	0	1	2	3	4

DENSIOMI READINGS	
count covere	. ,
Center Left	
Center Upstream	
Center Downstream	
Center Right	
Left Bank (optional)	
Right Bank (optional)	

Int	er-tr	ansect:	FG			Wette	d Width (m):	
	FLOW HABITATS (% between transects, total=100%)		TRANSE				Cobble Embedded-	TAKE PHOTOGRAPHS (check box if taken and record photo
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	ness (%)	code) Downstream (required)
Cascade/ Falls		Left Bank				РА		Ш
Rapid		Left Center				РА		
Riffle		Center				P A		Upstream (required)
Run		Right Center				P A		
Glide		Right Bank				P A		
Pool		Note: Subs						es of the median axis of each particle or one of size
Dry			class ca	ategories	s listed o	n the supp	lemental page (direct measurements are preferred)

FULL VERSION

Revision Date: July 10, 2007

Site Code:	Site Name:	Da	ate://
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm):	Transect G

Tr	TRANSECT SUBSTRATES										
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ		dedness (%)					
Left Bank				Р	Α						
Left Center				Р	Α						
Center				Р	Α						
Right Center				Р	Α						
Right Bank				Р	Α						

	BANK STABILITY (score zone 5m up and 5m downstream of transect between bankfull - wetted width)									
Left Bank eroded vulnerable stable										
Right Bank	eroded	vulnerable	stable							

HUMAN INFLUENCE		ot Presei 10 m + <					en Bank ar el (record			annel
(circle only the closest to wetted channel)		Left l	Bank		Cha	nnel	Right Bank			
Walls/ Rip-rap/ Dams	Р	С	В	0	Υ	N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	Ν	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy>75%) 2 = Moderate (10-40%) circle one									
Vegetation Class		Le	ft B	ank			Righ	nt B	ank	
Upp	er Ca	anop	эу (>	5 m	high)					
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4
Lower	Can	ору	(0.5	m-5	m hig	h)				
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4
Grou	ınd C	ove	r (<0).5 n	n high)					
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4

INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Spar Mod Heav	ent se erate (vy (Heav	(<10 10-40 40-75	0%) 0%) 5%)
Filamentous Algae	0	1	2	3	4
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4
Boulders	0	1	2	3	4
Woody Debris >0.3 m	0	1	2	3	4
Woody Debris <0.3 m	0	1	2	3	4
Undercut Banks	0	1	2	3	4
Overhang. Vegetation	0	1	2	3	4
Live Tree Roots	0	1	2	3	4
Artificial Structures	0	1	2	3	4

0 В	C		Р
DENS READIN count co	igs (0- 1	17)
Center Left			
Center Upstrea			
Center Downstre			
Center Ri	ght		
Left Bar (optiona			
Right Ba (optiona			

Int	Inter-transect: GH							
	FLOW HABITATS % between transects, total=100%) INTER-TRANSECT SUBSTRATES (measure in mm or use size classes)				Cobble Embedded-			
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	ness (%)	
Cascade/ Falls		Left Bank				P A		
Rapid		Left Center				P A		
Riffle		Center				P A		
Run		Right Center				P A		
Glide		Right Bank				P A		
Pool		Note: Subs						s of the median axis of each particle or one of size
Drv			class ca	ategories	s listed c	n the supp	lemental page (direct measurements are preferred)

Site Code:	Site Name:	Da	te://
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm):	Transect H

TR	RANSEC	T SUBS	TRATES			Cobble Embed-
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СР	ОМ	dedness (%)
Left Bank				Р	Α	
Left Center				Р	Α	
Center				P	Α	
Right Center				Р	Α	
Right Bank				Р	Α	

		score zone 5m up etween bankfull - w	
Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable

HUMAN INFLUENCE		0 = Not Present B = On Bank C = Between Bank and 10 m from Channel P = >10 m + <50 m from Channel (record Yes or No)										
(circle only the closest to wetted channel)	Left Bank				Cha	nnel	Right Bank					
Walls/ Rip-rap/ Dams	Р	С	В	0	Υ	N	0	В	С	Р		
Buildings	Р	С	В	0	Υ	N	0	В	С	Р		
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р		
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р		
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р		
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р		
Park/ Lawn	Р	С	В	0			0	В	С	Р		
Row Crops	Р	С	В	0			0	В	С	Р		
Pasture/ Range	Р	С	В	0			0	В	С	Р		
Logging Operations	Р	С	В	0			0	В	С	Р		
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р		
Vegetation Management	Р	С	В	0			0	В	С	Р		
Bridges/ Abutments	Р	С	В	0	Υ	Ν	0	В	С	Р		
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р		

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy>75%) 2 = Moderate (10-40%) circle one									
Vegetation Class		Le	ft B	ank		ı	Righ	nt B	ank	
Upp	er Ca	anop	ру (>	5 m	high)					
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4
Lower	Can	ору	(0.5	m-5	m hig	h)				
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4
Grou	ınd C	ove	r (<0).5 n	n high)					
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4

INSTREAM HABITAT COMPLEXITY	1 = Sparse (
Filamentous Algae	0	1	2	3	4	
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4	
Boulders	0	1	2	3	4	
Woody Debris >0.3 m	0	1	2	3	4	
Woody Debris <0.3 m	0	1	2	3	4	
Undercut Banks	0	1	2	3	4	
Overhang. Vegetation	0	1	2	3	4	
Live Tree Roots	0	1	2	3	4	
Artificial Structures	0	1	2	3	4	

	•
DENSIOM READINGS count covere	(0-17)
Center Left	
Center Upstream	
Center Downstream	
Center Right	
Left Bank (optional)	
Right Bank (optional)	

<u> </u>	ter-t	ransect:	HI			Wetted	d Width (m):
FLOW HABITATS (% between transect total=100%)		-TRANSE ure in mm		Cobble Embedded-			
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	ness (%)
Cascade/ Falls		Left Bank				P A	
Rapid		Left Center				P A	
Riffle		Center				P A	
Run		Right Center				P A	
Glide		Right Bank				P A	
Pool		Note: Subs					direct measure
Dm/	1 !		class ca	ategories	s listed o	n the supp	lemental page (

Site Code:	Site Name:	Da	te:/
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm):	Transect I

TR	TRANSECT SUBSTRATES										
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ		dedness (%)					
Left Bank				Р	Α						
Left Center				Р	Α						
Center				P	Α						
Right Center				Р	Α						
Right Bank				Р	Α						

	BANK STABILITY (score zone 5m up and 5m downstream of transect between bankfull - wetted width)									
Left Bank eroded vulnerable stable										
Right Bank	eroded	vulnerable	stable							

HUMAN INFLUENCE		ot Presei 10 m + <					en Bank ar el (record			annel
(circle only the closest to wetted channel)		Left l	Bank		Cha	nnel	Right Bank			
Walls/ Rip-rap/ Dams	Р	С	В	0	Υ	N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	Ν	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy>75%) 2 = Moderate (10-40%) circle one										
Vegetation Class		Le	ft B	ank		ı	Righ	nt B	ank		
Upper Canopy (>5 m high)											
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4	
Lower Canopy (0.5 m-5 m high)											
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4	
Grou	ınd C	ove	r (<0).5 n	n high)						
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4	
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4	
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4	

INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)					
Filamentous Algae	0	1	2	3	4	
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4	
Boulders	0	1	2	3	4	
Woody Debris >0.3 m	0	1	2	3	4	
Woody Debris <0.3 m	0	1	2	3	4	
Undercut Banks	0	1	2	3	4	
Overhang. Vegetation	0	1	2	3	4	
Live Tree Roots	0	1	2	3	4	
Artificial Structures	0	1	2	3	4	

DENSIOMI READINGS count covere	(0-17)
Center Left	
Center Upstream	
Center Downstream	
Center Right	
Left Bank (optional)	
Right Bank (optional)	

<u> </u>	iter-t	ransect:	IJ			Wetted	d Width (m):
FLOW HABITATS (% between transec total=100%)			-TRANSE				Cobble Embedded-
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	ness (%)
Cascade/ Falls		Left Bank				РА	
Rapid		Left Center				РА	
Riffle		Center				РА	
Run		Right Center				P A	
Glide		Right Bank				РА	
Pool		Note: Subs					direct measure
_	4		class c	ategories	s listed c	on the supp	lemental page (

Site Code:	Site Name:	Date	e://
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm):	Transect J

Tr	TRANSECT SUBSTRATES										
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СР	ОМ	dedness (%)					
Left Bank				Р	Α						
Left Center				Р	Α						
Center				Р	Α						
Right Center				Р	Α						
Right Bank				Р	Α						

	BANK STABILITY (score zone 5m up and 5m downstream of transect between bankfull - wetted width)									
Left Bank eroded vulnerable stable										
Right Bank	eroded	vulnerable	stable							

HUMAN INFLUENCE		ot Presei 10 m + <					en Bank ar el (record			annel
(circle only the closest to wetted channel)		Left l	Bank		Cha	nnel	Right Bank			
Walls/ Rip-rap/ Dams	Р	С	В	0	Υ	N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	Ν	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy>75%) 2 = Moderate (10-40%) circle one										
Vegetation Class		Le	ft B	ank	(-	Righ	ght Bank			
Upp	Upper Canopy (>5 m high)										
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4	
Lower	Lower Canopy (0.5 m-5 m high)										
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4	
Grou	Ground Cover (<0.5 m high)										
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4	
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4	
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4	

INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Spar Mod Heav	ent se erate (/y (Heav	10-40 40-7	Ó%) O%) 5%)
Filamentous Algae	0	1	2	3	4
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4
Boulders	0	1	2	3	4
Woody Debris >0.3 m	0	1	2	3	4
Woody Debris <0.3 m	0	1	2	3	4
Undercut Banks	0	1	2	3	4
Overhang. Vegetation	0	1	2	3	4
Live Tree Roots	0	1	2	3	4
Artificial Structures	0	1	2	3	4

DENSIOMI READINGS count covere	(0-17)
Center Left	
Center Upstream	
Center Downstream	
Center Right	
Left Bank (optional)	
Right Bank (optional)	

Int	er-tr	ransect:	JK			Wetted	d Width (m):	
FLOW HABITATS (% between transect total=100%)			TRANSE				Cobble Embedded-	
Channel Type	%	Position	Dist from LB (cm)	Depth (cm)	mm/ size class	СРОМ	ness (%)	
Cascade/ Falls		Left Bank				P A		
Rapid		Left Center				P A		
Riffle		Center				P A		
Run		Right Center				P A		
Glide		Right Bank				P A		
Pool		Note: Subs					direct measure	
D		1	class ca	ategories	s listed o	n the supp	lemental page (

Revision Date: July 10, 2007

Site Code:	Site Name:	Da	ate://
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (cm):	Transect K

TR	Cobble Embed-						
Position	Dist from LB (cm)	Depth (cm)	mm/ size class	I CPOMI			
Left Bank				Р	Α		
Left Center				Р	Α		
Center				Р	Α		
Right Center				Р	Α		
Right Bank				Р	Α		

	BANK STABILITY (score zone 5m up and 5m downstream of transect between bankfull - wetted width)								
Left Bank	Left Bank eroded vulnerable stable								
Right Bank	Right eroded vulnerable stable								

HUMAN INFLUENCE	P = >10 III + <50 III III0III CIIalillei Chainlei (record res or No)					annel				
(circle only the closest to wetted channel)		Left I	Bank		Cha	nnel	Right Bank			
Walls/ Rip-rap/ Dams	Р	С	В	0	Υ	N	0	В	С	Р
Buildings	Р	С	В	0	Υ	N	0	В	С	Р
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Р
Road/ Railroad	Р	С	В	0	Υ	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Υ	N	0	В	С	Р
Landfill/ Trash	Р	С	В	0	Υ	N	0	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crops	Р	С	В	0			0	В	С	Р
Pasture/ Range	Р	С	В	0			0	В	С	Р
Logging Operations	Р	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Υ	N	0	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	0	Υ	N	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0			0	В	С	Р

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy>75%) 2 = Moderate (10-40%) circle one									
Vegetation Class		Le	ft B	ank	(Right Bank				
Upp	er Ca	anop	ру (>	5 m	high)					
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4
Lower	Lower Canopy (0.5 m-5 m high)									
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4
Grou	ınd C	ove	r (<0).5 n	n high)					
Woody shrubs and saplings <0.5 m	0	1	2	3	4	0	1	2	3	4
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4
Barren, bare soil/ duff	0	1	2	3	4	0	1	2	3	4

INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Spar Mod Heav	ent se erate (vy (Heav	(<10 10-40 40-75	0%) 0%) 5%)
Filamentous Algae	0	1	2	3	4
Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4
Boulders	0	1	2	3	4
Woody Debris >0.3 m	0	1	2	3	4
Woody Debris <0.3 m	0	1	2	3	4
Undercut Banks	0	1	2	3	4
Overhang. Vegetation	0	1	2	3	4
Live Tree Roots	0	1	2	3	4
Artificial Structures	0	1	2	3	4

_								
	DENSIOMETER READINGS (0-17) count covered dots							
	Center Left							
	Center Upstream							
	Center Downstream							
	Center Right							
	Left Bank (optional)							
	Right Bank (optional)							

TAKE PHOTOGRAPHS (check box if taken and record photo code)		
Upstream (required)		
Downstream (optional)		

SWAMP Stream Habitat Characterizati	ion Form	<u>FULL</u>	<u>VERSION</u>	Revision Date: July 10, 2007
Site Code:				FULL FORM
	Date:	/	_/	TOLE TOKW
Site Map:				
Field Notes/ Comments:				
		FIONAL P	HOTOGRAPHS	
Description	Photo Code		Descri	ption Photo Code
		ļ		

Flow Habitat	DESCRIPTION				
Туре	DECOMI HOR				
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence				
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock				
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than riffles				
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).				
Runs	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A step-run is a series of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope				
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)				
Pools	A reach of stream that is characterized by deep, low-velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)				

BANK STABILITY Although this measure of the degree of erosive potential is subjective, it can provide clues to the erosive potential of the banks within the reach. Assign the category whose description best fits the conditions in the area between the wetted channel and bankfull channel (see figure below)				
Eroded Banks show obvious signs of erosion from the currer previous water year; banks are usually bare or nearly				
Vulnerable	Banks have some vegetative protection (usually annual growth), but not enough to prevent erosion during flooding			
Stable	Bank vegetation has well-developed roots that protect banks from erosion; alternately, bedrock or artificial structures (e.g., concrete/ rip-rap) prevent bank erosion			

Size Class Code	Size Class Range	Size Class Description	Common Size Reference
RS	> 4 m	bedrock, smooth	larger than a car
RR	> 4 m	bedrock, rough	larger than a car
ХВ	1 - 4 m	boulder, large	meter stick to car
SB	25 cm - 1.0 m	boulder, small	basketball to meter stick
СВ	64 - 250 mm	cobble	tennis ball to basketball
GC	16 - 64 mm	gravel, coarse	marble to tennis ball
GF	2 – 16 mm	gravel, fine	ladybug to marble
SA	0.06 – 2 mm	sand	gritty to ladybug
FN	< 0.06 mm	fines	not gritty
НР	< 0.06 mm	hardpan (consolidated fines)	
WD	NA	wood	
RC	NA	concrete/ asphalt	
ОТ	NA	other	

CPOM/ COBBLE EMBEDDEDNESS

CPOM: Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

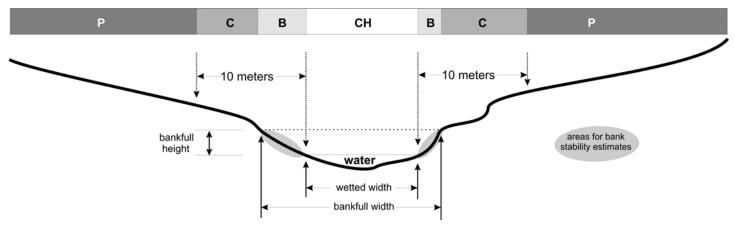


Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

Н

G

F

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1.49

1.03

1.06

1.10

1.15

4

3

4

5

15

15

15

15

150

143

187

195

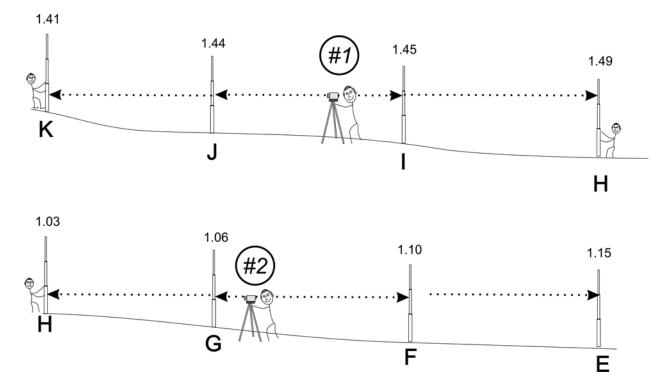
X **AUTOLEVEL EXAMPLE CLINOMETER SLOPE** and **BEARING FORM HANDLEVEL MAIN SEGMENT** SUPPLEMENTAL SEGMENT (record percent of inter-transect distance in each segment (record percent of inter-transect distance in each segment if supplemental segments are used) if supplemental segments are used) **Starting** Slope or Slope (%) or Percent Percent **Transect** Segment Segment Elevation Bearing (0°-359°) Elevation Bearing (0°-359°) Stadia rod of Total Stadia rod of Total Length Length Difference Difference Length Length measurements measurements (%) (%) cm \ % cm ☐ % [K 1.41 J 1.44 3 15 140 100 1.45 1 15 145 100

100

100

100

100



- 1. Level the autolevel at Position #1
- 2. Place base of stadia rod at water level every time
- 3. Sight to stadia rod at Transect K, then Transect J
- 4. Rotate scope and sight to Transects I and H.
- 5. Move level to Position #2 and re-level

- 6. Re-sight to stadia rod at Transect H, then Transect G
- 7. Rotate scope and sight to Transects F and E

Note: sites will vary in the number of separate level positions needed to survey the reach